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## **Does your switch have amnesia? : Forgotten and misreported records can cost phone companies millions.(Industry Trend or Event)**

Author/s: Glenn Ross, Bob Miller

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Think about how many calls you made this month. How many times did you dial information? How many long distance calls did you make, and to whom? Can't remember? Well, that's OK, because your phone company believes that for each call you make, there is a switch recording all the billing information they need onto a Call Detail Record (CDR).

But, what happens when a record isn't created? Will you dutifully pick up the phone and tell your telco that the bill you received was woefully underestimated? Maybe, but probably not. This is why it is so important that the phone company find the best methods for tracking and ensuring that calls are routed and billed accurately.

Every day, switches around the world fail to record accurate CDRs. While there are many reasons for this, the underlying fact is that recent competition has pushed telephone companies to improve customer satisfaction by spending money on switch enhancements and advanced billing software. Now with most of this infrastructure in place, phone companies have begun to evaluate how to tighten their bottom lines. While the majority of these evaluations take place at the billing level, the fact is that the switch is equally important and often ignored.

### **Billing Records Start at the Switch**

Traditionally, the switch is considered the sole responsibility of a carrier's network administration department. But the switch is really the start of the billing stream. (see figure 1) The switch serves the function of routing calls and writing CDRs. While network administrators generally test for call quality and routing issues, they often don't have the time or manpower to test for CDR accuracy.

## Trending Alone Isn't Enough

One common misperception in the industry is that trending and similar testing will help to weed out potential problems in the switch. While trending is an important piece to the billing puzzle, it alone will not solve these problems. Trending should be used in conjunction with switch testing equipment in order to pinpoint problems as they occur.

The reason for this is twofold. First, trending is least effective during times when switches are most vulnerable to errors. For example, every time a new call code is introduced into a switch, trending must begin from scratch on that type of call. This means if an error was introduced at the start, the trending built around this call code will reflect this error.

Second, trending is best suited to tell you that an error exists, but not where it exists. In these instances trending will trigger research in both the billing and the network departments. This research could go on for days or weeks before the error is finally resolved.

## Understanding How Switches Work

To best understand how proper testing of a switch should be administered, you need to be familiar with how the switch works. Switches are comprised of hardware and software that vary in complexity according to the type of market in which they are being used. Each switch is responsible for writing information regarding the origination and termination of a call along with its duration, service provider and services used. This information has become increasingly complex as more services, rate centers and calling plans are added.

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